CLAIMS

What is claimed:

1. A method for a single hardware platform to support multiple network traffic types, comprising:

detecting a request to establish a network connection to the hardware platform;

determining network traffic type used by the network connection; and

executing code to selectively enable connection components to process data over the network connection, according to the network traffic type.

2. The method of claim 1 further comprising invoking an appropriate one of a plurality of software images corresponding to the network traffic type.

3. The method of claim 2 further comprising copying the appropriate one of a plurality of software images into a local memory on the single platform.

4. The method of claim 2 wherein one of the plurality of network traffic type being voice data.

5. The method of claim 2 wherein one of the plurality of network traffic type being Asynchronous Transfer Mode (ATM).

6. The method of claim 2 wherein one of the plurality of network traffic type being Frame Relay.

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7. An apparatus for a multi-service network architecture for processing network traffic arriving on a network connection comprising:

a plurality of network connection components residing on a single platform; and

a processor coupled to the plurality of network connection components and configured to execute a predetermined one of a plurality of software images corresponding to the type of network traffic arriving on the network connection and to selectively enable at least one of the plurality of network connection components according to the predetermined one of a plurality of software images.

8. The apparatus of claim 7 further comprising a local memory coupled to the processor and configured to hold the predetermined one of a plurality of software images.

9. The apparatus of claim 8 wherein at least one the plurality of network connection components is a Time Division Multiplexed (TDM) switch configured to provide full-duplex serial paths.

10. The apparatus of claim 9 wherein the plurality of network connection components comprises a plurality of T1/E1 framers coupled to a first set of plurality of ports on the TDM switch.

11. The apparatus of claim 10 further comprising a plurality of digital signal processing modules coupled to a second set of a plurality of ports on the TDM switch.

12. The apparatus of claim 10 further comprising a plurality of serial communication controllers coupled to a third set of a plurality of ports on the TDM switch.

13. The apparatus of claim 11 further comprising a connection management software coupled to the local memory and configured to identify the type of connection set-up being requested and to invoke a corresponding one of a plurality of software images which programs the TDM switch to correctly manage desired connectivity.

14. A system for a multi-service network architecture for processing network traffic arriving on a network connection comprising:

a plurality of network connection components residing on a single platform; and

a processor coupled to the plurality of network connection components and configured to execute a predetermined one of a plurality of software images corresponding to the type of network traffic arriving on the network connection and to selectively enable at least one of the plurality of network connection components according to the predetermined one of a plurality of software images.

15. The system of claim 14 further comprising a local memory coupled to the processor and configured to hold the predetermined one of a plurality of software images.

16. The system of claim 15 wherein at least one the plurality of network connection components is a Time Division Multiplexed (TDM) switch configured to provide full-duplex serial paths.

17. The system of claim 16 wherein the plurality of network connection components comprises a plurality of T1/E1 framers coupled a first set of plurality of ports on the TDM switch.

18. The system of claim 17 further comprising a plurality of digital signal processing modules coupled to a second set of a plurality of ports on the TDM switch.

19. The system of claim 18 further comprising a plurality of serial communication controllers coupled to a third set of a plurality of ports on the TDM switch.

20. The system of claim 19 further comprising a connection management software coupled to the local memory and configured to identify the type of connection set-up being requested and to invoke a corresponding one of a plurality of software images which programs the TDM switch to correctly manage desired connectivity.

21. An apparatus for a multi-service network architecture for processing network traffic arriving on a network connection comprising:

a plurality of means for processing data for a predetermined network traffic type residing on a single platform; and

means for executing code for a predetermined one of a plurality of software images corresponding to the type of network traffic arriving on the network connection and to selectively enable at least one of the plurality of means for processing data according to the predetermined one of a plurality of software images, the means for executing coupled to the plurality of means for processing.

22. The apparatus of claim 20 further comprising means for storing the predetermined one of a plurality of software images, the means for storing coupled to the means for executing.

23. The apparatus of claim 22 wherein at least one the plurality of means for processing is a Time Division Multiplexed (TDM) switch configured to provide full-duplex serial paths.

24. The apparatus of claim 23 wherein the plurality of means for processing comprises a plurality of T1/E1 framers coupled to a first set of plurality of ports on the TDM switch.

25. The apparatus of claim 24 further comprising a plurality of digital signal processing modules coupled to a second set of a plurality of ports on the TDM switch.

26. The apparatus of claim 25 further comprising a plurality of serial communication controllers coupled to a third set of a plurality of ports on the TDM switch.

27. The apparatus of claim 26 further comprising means for identifying the type of connection set-up being requested at the network connection and to invoke a corresponding one of a plurality of software images which programs the TDM switch to correctly manage desired connectivity, the means for identifying coupled to the means for storing.